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AUTHOR Ory, John C.; Pieper, David M.
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ABSTRACT

A study was undertaken in six fall 1978 courses at a large midwestern university to examine possible biasing influences on student ratings of instruction brought about by pre-course expectations of the course. Student and course demographic variables were analyzed as possible determiners of affective entry into the course. These data were examined for influence on student ratings of instruction. It was asked whether or not evaluations are more influenced by student expectations than by student background or course circumstances. Finally, data were examined for bias due to these out-of-class factors versus attitude change due to instruction. It was found that students brought to the courses expectations for and opinions about the instructor and course. These levels of affective entry were created or influenced by several student and course characteristics. Higher grade level students more often brought positive expectations of course and instructor. Electives or courses in the students' major field tended to contain students with high expectations. Pre-course gossip about courses also tended to be more positive than negative. Results suggest that faculty are in greater control of student evaluations than are the pre-course opinions of students or the demographic characteristics of the students or course. A list of references and statistical tables are appended. (MSE)

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THE INFLUENCE OF STUDENT'S AFFECTIVE ENTRY ON INSTRUCTOR AND COURSE EVALUATIONS

John C. Ory and David M. Pieper

Measurement and Research Division
University of Illinois
Urbana-Champaign

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American Educational Research Association

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The Influence of Student's Affective Entry on Instructor and Course Evaluations

Research on student ratings of instruction has demonstrated that ratings based on responses to objective items may be biased indicators of instructor and course quality. A general concern of instructors is that ratings are greatly influenced by conditions or circumstances that occur independent of the classroom experience; influences that are often out of the control of the instructor being evaluated. For example research has shown that student ratings are influenced, often in complex ways, by class size, elective-required status of the course, expected grade and potential use of the ratings (Feldman, 1976, 1978).

To date, most of the studies examining biasing influences on student ratings have examined the impact of course and student demographic factors (Costin, Greenough and Menges, 1971; Centra and Creech, 1976; Marsh, Note 1). Few studies have investigated biasing influences brought to a course in the way of pre-course expectations or the affective entry level of the students. Granzin and Painter (1973) examined the relationship between course ratings and the static and dynamic (i.e., reflecting change over time) attitudes of the students as measured prior to the course and during the course, respectively. These static and dynamic attitudes were regressed on three post-course ratings. However, the dynamic influences analyzed in their study were obtained by subtracting pre-course measurements from corresponding post-course measurements. As Chermesh (1977) commented, "Their discussion and design overlooked many of the statistical artifacts that plague 'change scores' such as regression effects, floor and ceiling effects, and the well known unreliability of such measures (p. 291)." Chermesh avoided such methodological problems in his study of student affect and course ratings. However, his two step causal analysis examined attitudinal assessments collected during the middle and end of the academic year, thus, ignoring the pre-course expectations of the students. Chermesh concluded that his study could have been improved by the addition of the pre-course measurement.

In another study, Painter and Granshin (1972) collected students' grade expectations on the first and last day of class to examine the strength of relationship between change in course evaluation and change in student perception

of performance. They concluded that "students who revise grade expectations significantly more often shifted their evaluation in the same direction (p. 78)." Given these results the question could also be raised whether or not revisions of student attitude toward the instructor and the course are also associated with changes in course evaluations. Or, what is the effect of student attitude change on objective ratings of instruction?

The intent of the study was to examine possible biasing influences on student ratings of instruction brought about by the pre-course expectations of the students. The study first attempted to identify factors which create or affect the pre-course expectation of students. Student and course demographic variables were analyzed as possible determiners of affective entry. Second, affective entry data was compared to course and student demographic information in terms of their relative influence on student ratings of instruction. The question was addressed whether or not course evaluations are more influenced by the expectations of the students than by the background of the student or the circumstances of the course.

Finally, the validity of objective student ratings of instruction was challenged through a comparison of rating bias due to out-of-class factors (e.g., pre-course affect and demographic information) versus in-class factors (e.g., attitude change due to instruction). Affective entry and exit data were used to assess student attitude change and to test the hypothesis that valid measures of instructional quality should be more influenced by the instructional process (in-class factors) than by pre-course student expectations or demographic variables (out-of-class factors).

METHOD

Instruments

Pre-course data was collected through the administration of two instruments. The first instrument was an "Affective Entry Level Scale" developed by Deaton, Poggio and Glasnapp (Note 2). The self report Likert-type scale assesses the expressed affect of students prior to course instruction (affective entry level). The 48 item scale provides subscale scors on four affective entry dimensions: Affective Entry, Assuredness, Career Relevance and Internal/External Course Management (preference for student versus teacher centered course). Subscale reliability coefficients (Cronbach's α) reported by the authors ranged from .93 to .68.

Also administered was a demographic questionnaire. The questionnaire collected information about the students' grade level, sex, GPA and school progression (whether or not the student went directly from high school to college). Also included on the questionnaire were questions about the electivity of the course (wherein the questionnaire was administered); whether or not the course was in the student's major or minor field of study; the amount of pre-course "gossip" heard about the course; the degree to which students "looked forward" to the course; expected course grade; and students' pre-course opinions (positive, no opinion or negative) about the course and the instructor.

Post course information was collected through administration of the Instructor and Course Evaluation System (ICES) student rating questionnaire (Office of Instructional Resources, Note 3). ICES is a Cafeteria-type student rating system which permits each instructor to select his or her own evaluation items. However, the first three evaluation items on the questionnaire are the same for each instructor. The three items, global in content, are Rate the course content, Rate the instructor, and Rate the course in general. Students indicate their response on a six point scale anchored by "poor" and "excellent." For purposes of the study, only responses to the latter two global items were analyzed. In addition, students were also asked at the end of the course to indicate their post-course opinions (positive, no opinion, or negative) about the course and the instructor and their expected grade in the course.

Data Collection

Subjects were 553 students enrolled in six fall '78 semester courses at a large midwestern university. Included were three graduate and three undergraduate level courses in economics, education and psychology. On the first day of instruction, prior to any instructor comments, students were asked to complete the affective entry scale and the demographic questionnaire. Students were guaranteed response anonymity. During the last week of the semester, students were administered the ICES questionnaire. Students' pre- and post-course data were combined to provide 435 matched data sets.

Data Analysis

To identify factors which create or affect the pre-course expectations of students, Pearson product moment correlations were computed between the student and course demographic variables (e.g., GPA, sex, major/minor course) and the affective entry variables (e.g., subscale scores and pre-course opinions of instructor and course). A second analysis compared course and student demographic information with affective entry data in terms of their relationships to student ratings of instruction. Step-wise multiple-regression analyses were conducted, employing the course and student demographic variables and affective entry data as predictors and student responses to evaluation items--Rate the instructor and Rate the course in general--as criteria.

Final analyses examined rating bias due to out-of-class factors (e.g., pre-course affect and demographic information) versus in-class factors (e.g., attitude change due to instruction). Similar step-wise multiple regression analyses as those previously cited were carried out with the addition of attitude change predictor variables. Attitude change variables were dummy coded variables created from discrepancies in students' pre- and post-course opinions. In total, three dummy coded variables were created for each student attitude toward the course, the instructor and expected grade. Dummy coded variables indicated whether or not a student made a positive, negative, or no shift from their initial attitude.

Differences in student ratings due to in-class attitude change were further investigated through computation of separate one-way analysis of variance statistics employing type of attitude shift (positive, negative and no change) as independent variable and student responses to the first two global evaluation items as dependent variables. Resultant F-ratios and Scheffé post hoc statistics were tested at a .01 level of significance.

RESULTS

Relationship Between Demographic and Affective Entry Variables

Correlation coefficients between student and course demographic variables and affective entry variables are presented in Table 1. Due to the rather large sample size many of the correlations were statistically significant ($p < .01$). However, the size of only a few of the correlations are of "practical" significance.

The most noticeable relationships found between demographic and affective entry variables were due to the influences of grade expectations. Students who expected higher course grades than others demonstrated more positive affective entry, more confidence in their ability to perform in the course, greater expectations for the course and more positive pre-course opinions about the course and the instructor. It was also evident that this same group of students desired a student versus teacher centered course.

Insert Table 1

Other sizeable relationships revealed that students found elective courses and courses in their major field of study to be more career relevant. Students in major field of study courses also reported greater expectations for the course. Upper level students (i.e., seniors and graduate students) reported higher pre-course attitudes toward the instructor than did lower level students. Also, the more gossip students reported hearing about the course prior to instruction, the more positive were their affective entry and pre-course opinions about the course and the instructor.

Relationship Between Demographic and Affective Variables and Student Ratings

Correlations between demographic and affective entry variables and student ratings of the instructor and the course are presented in Table 2. Overall, the low correlations demonstrated weak relationships between either demographic or affective entry variables and student ratings. The affective entry variables were, however, slightly higher related to the student ratings than were the demographic variables. Positive relationships were identified between affective entry subscale scores and course ratings, and between pre-course opinions of the instructor and both instructor and course ratings. Greater student expectations were also related to higher course ratings. The lone demographic variable related to both student ratings was grade level. Upper level students assigned higher instructor and course ratings than did lower level students.

Insert Table 2

The results of the step-wise multiple regression analyses (Table 3) suggested that the strongest of the demographic and affective entry predictors were as follows: (1) for course ratings: grade level, affective entry subscale

score, and pre-course opinion of instructor ($R = .397$, $p < .05$); (2) for instructor ratings: grade level and pre-course opinion of instructor ($R = .340$, $p < .05$). For both criterion variables the low multiple R value reveals the weak predictive power of both demographic and affective entry variables. The strongest (yet still weak) predictors of course and instructor ratings were combinations of a single demographic variable with one or two affective entry variables.

Insert Table 3

Relationship Between Affective Shift Variables and Student Ratings

Correlations between affective shift variables (positive, negative, or no change in attitude toward the course, instructor and expected grade) and student ratings of the course and the instructor are presented in Table 2. Affective shift variables revealed considerably higher correlations with student ratings than did either demographic or affective entry variables. Negative shifts (pre- to post-course) in opinion about the course and instructor were highly related to lower course and instructor ratings. In turn, positive opinion shifts coincided with higher course and instructor ratings, yet the strength of the relationships were greater for students demonstrating negative rather than positive shifts in opinions. Lower post-course than pre-course grade expectations were also related to lower course and instructor ratings. Increases in student grade expectations were unrelated to changes in student ratings.

Results of the second set of step-wise multiple regression analyses comparing in- and out-of-class factors as predictors of student ratings are presented in Table 4. The strongest of the demographic, affective entry and affective shift predictors were as follows: (1) for course ratings: negative course opinion shift, negative instructor opinion shift, pre-course opinion of course, negative grade expectation shift, grade level and expectations ($R = .749$, $p < .05$); (2) for instructor ratings: negative instructor opinion shift, grade level, positive instructor opinion shift, pre-course opinion of instructor and negative course opinion shift ($R = .831$, $p < .05$). With the addition of the affective shift variables as predictors of student ratings sizeable increases in the previously computed multiple R values were evident. In total, in-class factors such as the attitude change variables

were much stronger predictors of student ratings than were either demographic or affective entry variables. The strongest predictors of course and instructor ratings were negative (in-class) attitude changes toward each respective criterion.

Insert Table 4

The influence of negative affective shifts on student ratings is further demonstrated through mean ratings (Table 5) of students making positive, negative or no affective shift in their opinion of the course, the instructor, or their expected course grade. For each triad of group means the negative shift group mean was significantly ($p < .01$) different from the other two group means as determined by Scheffé post hoc statistics computed from significant ANOVA results. The single exception is found for instructor ratings and shifts in opinion about the instructor, wherein all three attitudinal groups differ significantly from one another.

Insert Table 5

DISCUSSION

Students brought to the courses examined in the study expectations for and opinions about the instructor and the course. These opinions and expectations (or levels of affective entry) were created or influenced by several student and course characteristics. Higher grade level students more often reported positive pre-course opinions about their instructors than did lower grade level students. Students expecting to do well in the course also looked forward to the course. Elective courses or courses in the students' major field of study tended to contain students with high course expectations due to the perceived career relevance of such courses. Also the more gossip students heard about a course the more positive were their pre-course opinions of their instructors. Student gossip (or recalled memories of gossip) seemed to be more positive than negative in nature.

With the exception of the latter relationship the results are not very surprising, especially to instructors who compete for the privilege of teaching elective, upper level courses in the students' major field of study. The self-selection process, subject matter interest and career relevance are often cited as contributors to a high level of student motivation. (Doyle, 1975).

While the students appeared to possess pre-course opinions, these beliefs had little influence on final course or instructor ratings. The low multiple correlations computed in the analysis of demographic and affective entry variables as predictors of final course ratings indicated that only a small portion of the post-course rating variance could be explained by the student's attitudes and expectations brought to the course. Instead, student ratings were best predicted by students' pre- to post-course changes in their opinions about the course and the instructor. Attitude changes brought about by instruction (dependent on rather than independent of classroom activities) were the strongest predictors of final course evaluations. The multiple correlations computed with the addition of attitude change predictors were greatly increased for both ratings criteria: course ratings (R = .38 to .75) and instructors ratings (R = .33 to .83).

The regression equation for the prediction of course ratings also showed the diversity of influences on "Course in General" ratings. Negative opinion shifts toward the course, the instructor and the grade expected along with pre-course opinions of the course, student expectations and grade level were all significant predictors of course ratings. In contrast, significant predictors of instructor ratings centered more on instructor-only variables. Negative and positive opinion shifts of the instructor and pre-course opinions of the instructor were three of the five significant instructor rating predictors. Students seem to consider a wider range of factors when rating an entire course rather than just the instructor.

In terms of student attitude change during the course, negative rather than positive shifts in course, instructor and expected grade opinions were significantly related to lower course and instructor ratings. Only for instructor ratings were significant mean rating differences observed between individuals making positive and negative attitude shifts. It seems apparent that actions warranting negative shifts in attitude have a greater impact on students' evaluations than do actions producing positive or no attitude change. Results seem to warn against a ceiling effect for expectations, or the problems of having students bring to class pre-course opinions that are too high for the instructor to maintain or to improve upon during the course. Positive instructor reputations may be as burdensome as they are complimentary.

EDUCATIONAL SIGNIFICANCE

Student ratings of instruction were influenced more by in-class (attitude change pre- to post-course) rather than out-of-class (student/course demographic and affective entry) variables. The greater influence of factors dependent on rather than independent of the classroom experience lends support to the validity of student ratings for administrative decisions in many of todays colleges and universities. Faculty support and confidence in these rating systems is a critical component of the evaluation process. To date, faculty support has not been easily, if at all, achieved (McMartin and Rich, 1979; Rich, 1976). While the study needs to be replicated in other courses and institutions, the results can be used to address faculty concerns about biasing influences on student ratings beyond their direct control (i.e., student grade level, GPA, electivity of the course). Results suggest that faculty are in greater control of student evaluations than are the pre-course opinions of the students or the demographic characteristics of the students and the course.

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Table 1

Correlations Between Student and Course Demographic Variables and Affective Entry Variables (N=553)

Demographic Variables	Affective Entry Variables						
	Subscales						
Student:	Affective Entry	Assuredness	Career Relevance	Internal/External Course Management	Pre-Course Opinion of Instructor	Pre-Course Opinion of Course	Expectations[1]
G.P.A.	.09	.15*	-.02	.17*	.16*	.03	.09
Grade Level	.07	.02	.09	-.01	-.17*	.10	.12*
Sex	.10*	-.11*	-.11*	-.11*	.07	.00	.05
Progression	-.07	-.03	-.11*	-.03	-.11*	-.04	-.06
Grade Expectations	.30*	.39*	.14*	.22*	.13*	.24*	.27*
Course:							
Major/Minor	.12*	.03	.40*	.02	.01	.09	.16*
Elective/Required	-.06	-.13*	.27*	-.07	-.05	-.11*	-.03
Amount of Pre-Course Gossip Heard	.18*	.09	.10*	.08	.24*	.18*	.14*

[1] Based on responses (Strongly Agree, Agree, etc.) to: "I am really looking forward to this course."

* $p < .01$

Table 2

Correlations Between Demographic, Affective Entry, and Affective Shift Variables and Student Ratings of the Instructor and the Course (n=435)

		Student Ratings	
Demographic Variables:		**Rate the Instructor**	**Rate the Course**
G.P.A.		-.12*	.10
Grade Level		-.20*	-.26*
Sex		.07	.09
Progression		.12*	.06
Major/Minor		.13*	.04
Amount of Pre-Course Gossip Heard		-.02	-.08
Expected Grade		.05	.11
Affective Entry Variables:			
Affective Entry		.13*	.27*
Assuredness		.00	.10
Career Relevance		.04	.04
Internal/External Course Management		.12*	.09
Pre-Course Opinion of Instructor		.22*	.24*
Pre-Course Opinion of Course		.03	.13*
Expectations		.04	.19*
Affective Shift (Pre- to Post-Course)			
Opinion of Course	Positive Change	.16*	.15*
	No Change	.23*	.37*
	Negative Change	-.47*	-.63*
Opinion of Instructor	Positive Change	.49*	.28*
	No Change	.13	.17
	Negative Change	-.75*	-.55*
Expected Grade	Positive Change	-.02	.01
	No Change	.20*	.24*
	Negative Change	-.18*	-.25*

*$p < .01$

Table 3

Step-Wise Regression Analysis with Demographic and Affective Entry Predictors and Student Ratings Criteria

Predictor	Criterion = Course Ratings Beta Weight	t of Beta Weight
Grade level	.237	4.49**
Affective entry subscale score	-.222	4.09**
Pre-course opinion of instructor	-.118	2.11*
(N = 334) R = .379**	R^2 = .144	

Predictor	Criterion = Instructor Ratings Beta Weight	t of Beta Weight
Grade level	.251	4.70**
Pre-course opinion of instructor	-.158	2.96**
(N = 334) R = .326**	R^2 = .106	

*p < .05

**p < .01

Table 4

Step-Wise Regression Analyses with the Addition of Affective Shift Predictor Variables

Predictor	Criterion = Course Ratings	
	Beta Weight	t of Beta Weight
Negative course opinion shift	-.463	10.95**
Negative instructor opinion shift	-.313	7.65**
Pre-course opinion of course	-.111	2.39*
Negative grade expectation shift	-.129	3.42**
Grade level	.121	3.15**
Expectations	-.118	2.55
(N = 334)	R = .749	R^2 = .562

Predictor	Criterion = Instructor Ratings	
	Beta Weight	t of Beta Weight
Negative instructor opinion shift	-.479	12.04**
Grade level	.094	2.89**
Positive instructor opinion shift	.358	8.39**
Pre-course opinion of instructor	-.304	7.88**
Negative course opinion shift	-.144	4.19**
(N = 334)	R = .831	R^2 = .690

*p < .05

**p < .01

Table 5

Means and Standard Deviations of Student Ratings

by Affective Shift Categories

Affective Shift	Student Ratings: Rate the Course			Rate the Instructor		
		$\bar{X}$	SD		$\bar{X}$	SD
Opinion of Instructor:						
Positive shift	(n=165)	4.84	.95	(n=165)	5.35	.73
No shift	(n=116)	4.78	.95	(n=118)	4.88*	1.07
Negative shift	(n=150)	3.78*	1.31	(n=152)	3.39*	1.57
Opinion of Course:						
Positive shift	(n=108)	4.72	.86	(n=108)	4.91	1.14
No shift	(n=174)	4.93	.84	(n=176)	4.96	1.19
Negative shift	(n=149)	3.71*	1.37	(n=151)	3.78*	1.62
Expected Grade:						
Higher post-course grade	(n= 43)	4.61	1.26	(n= 43)	4.63	1.66
No shift	(n=167)	4.76	1.06	(n=168)	4.86	1.34
Lower post-course grade	(n=221)	4.20*	1.22	(n=224)	4.27*	1.44

*Group mean is significantly different ($p < .01$) from the other two group means within the triad based on Scheffé post hoc statistics computed from significant ANOVA results.